

Figure 1: Systems design chart of coherent nanodispersion-strengthened SMAs.

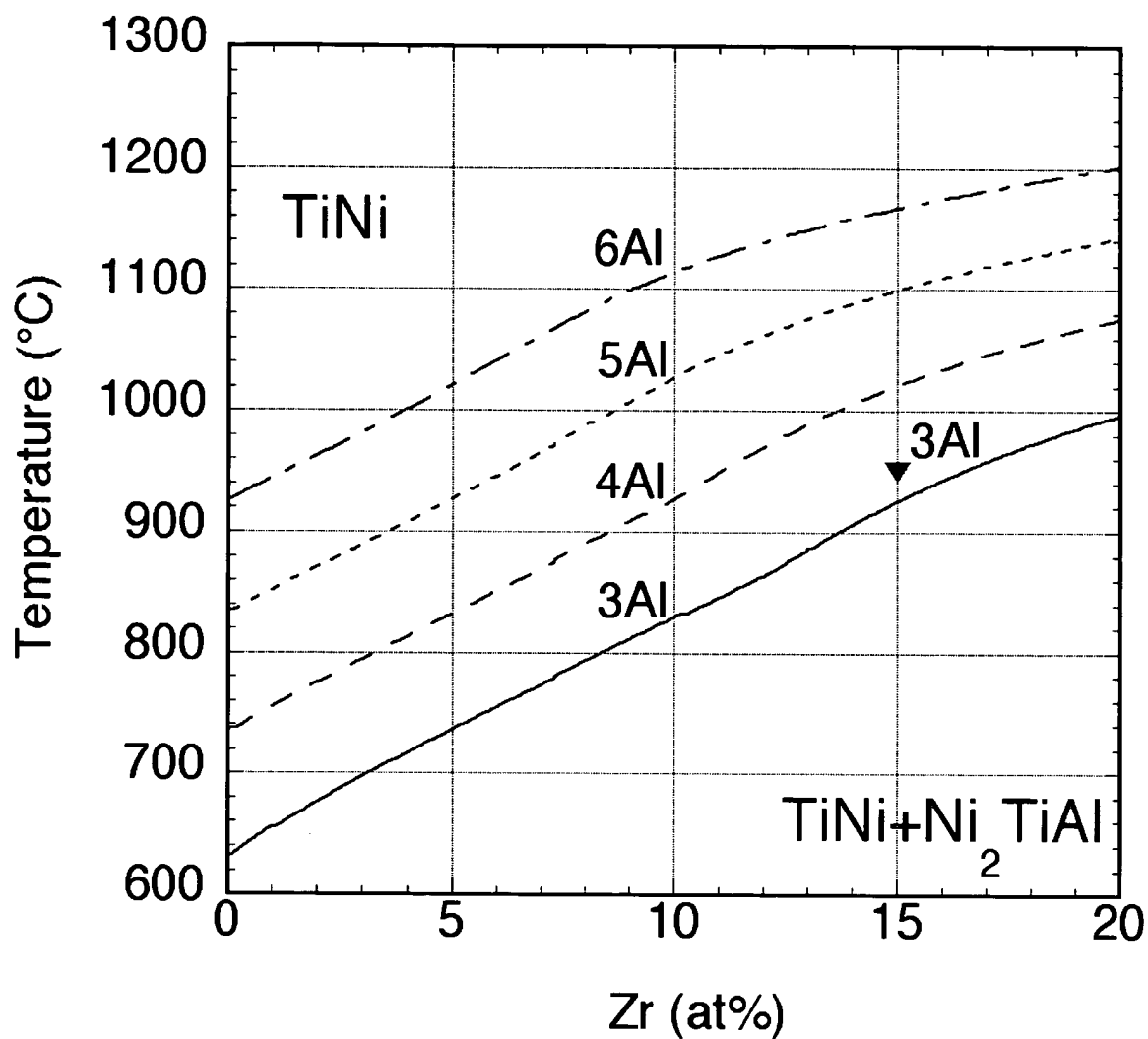


Figure 3: Solution Temperature vs. Zr Content.

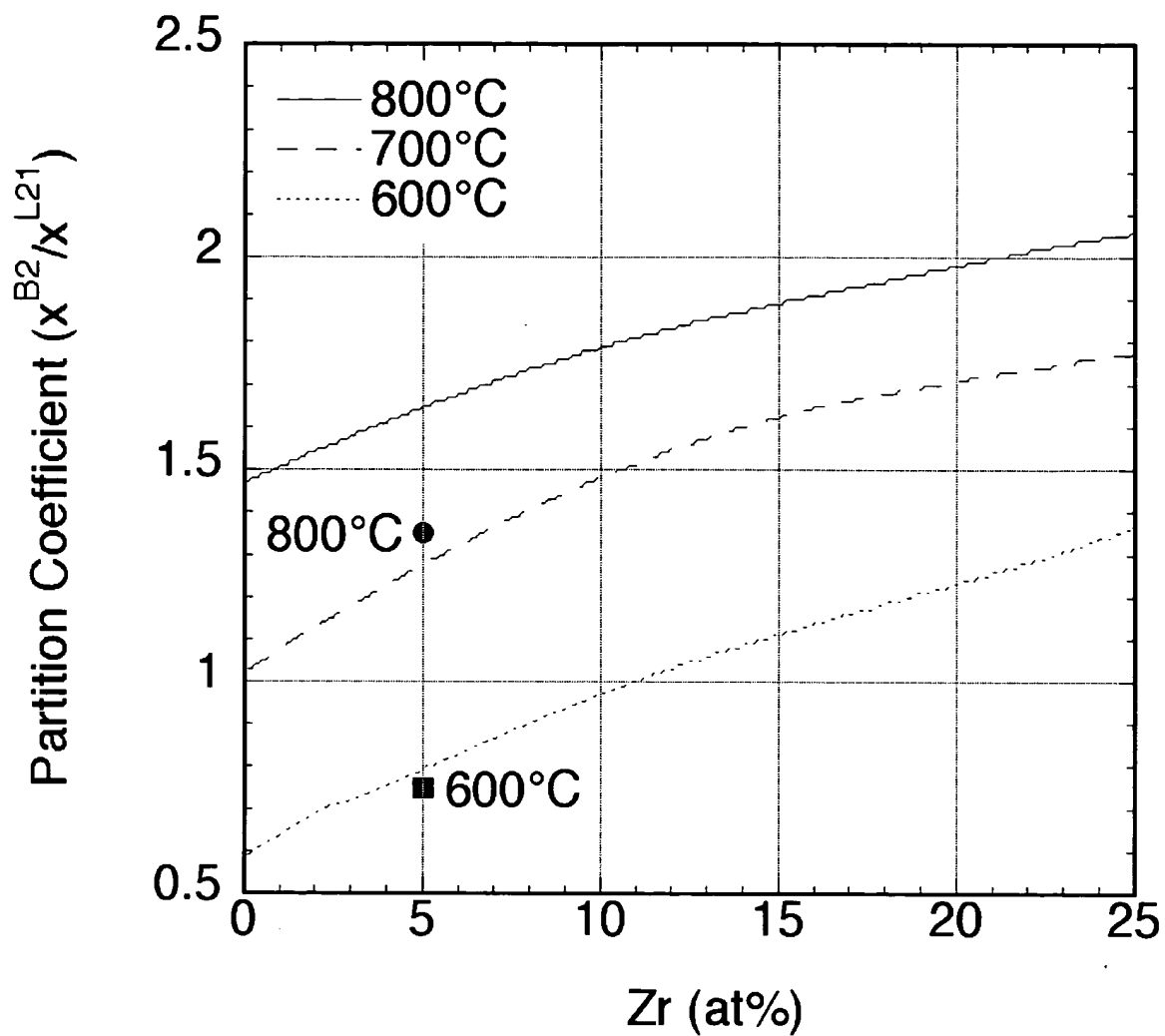


Figure 4: Partitioning of Zr between $B2$ -TiNi and $L2_1$ -Heusler phases.

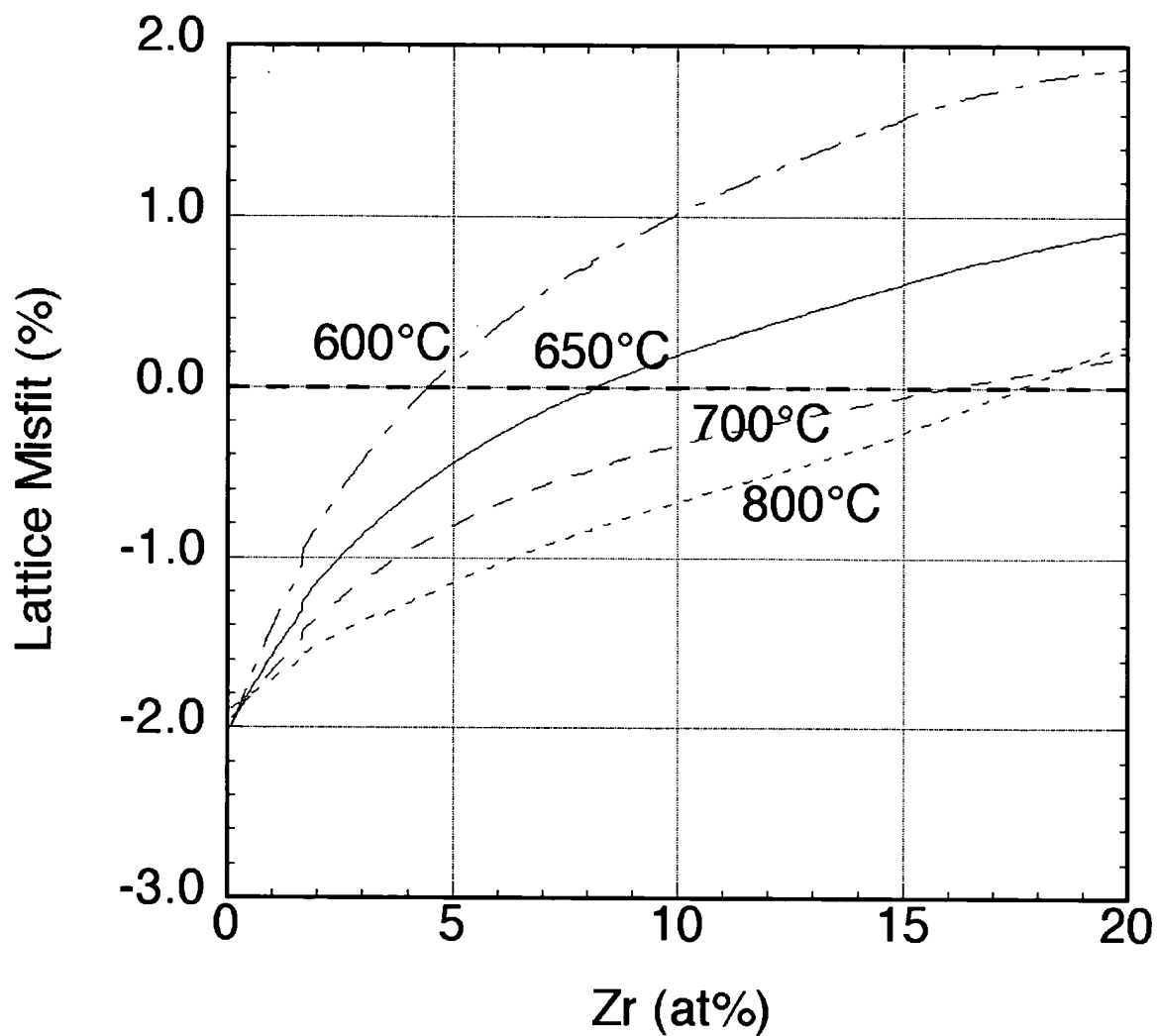


Figure 5: Ambient interphase lattice misfit vs. Zr content.

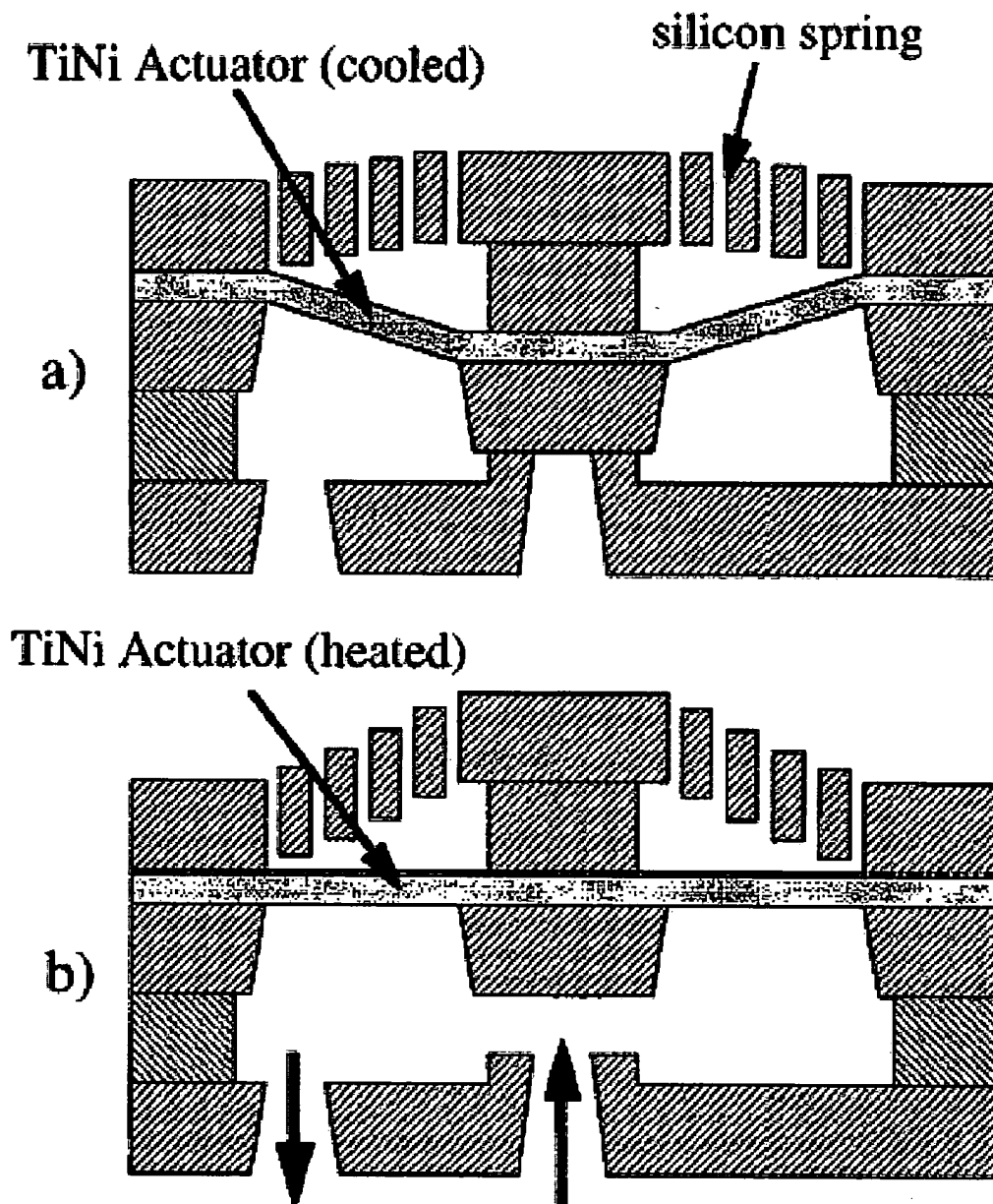


Figure 6: Microvalve using TiNi microactuators in (a) cooled and (b) heated state.

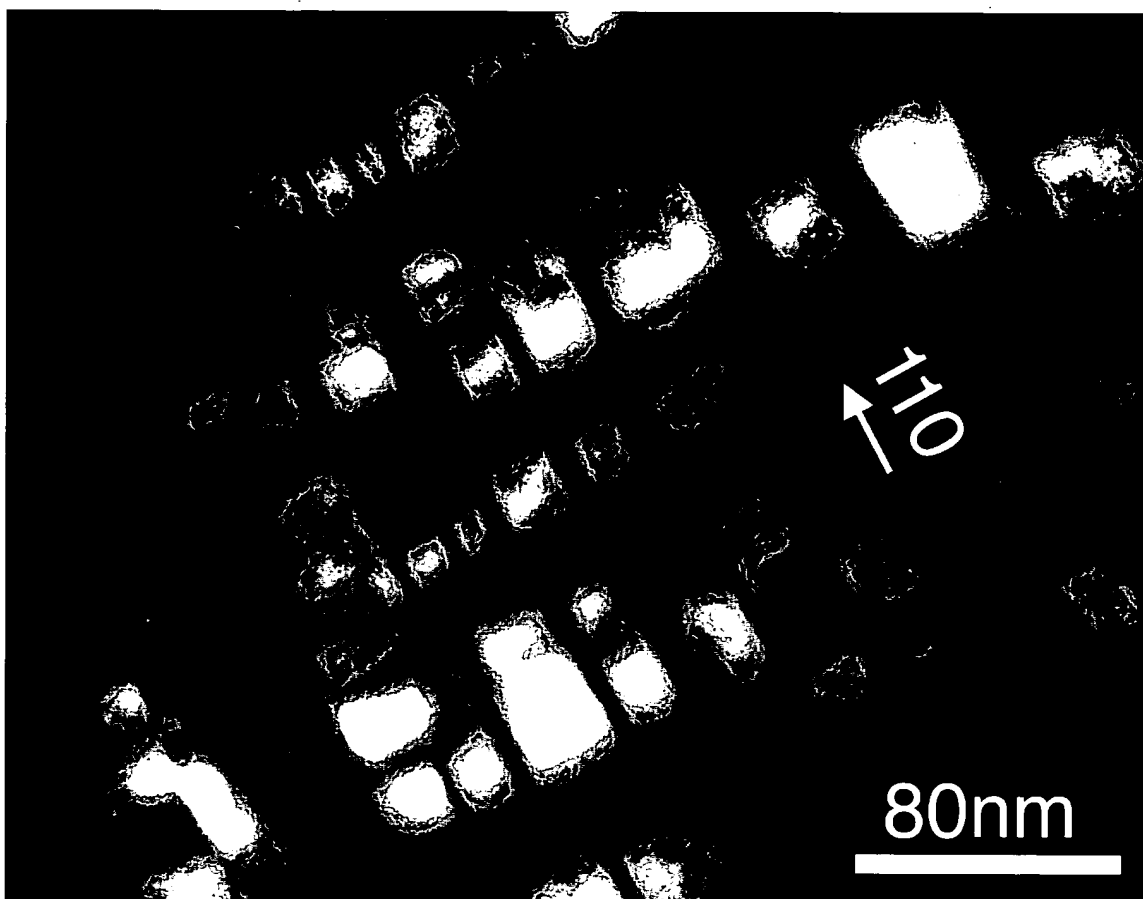


Figure 7A. TEM dark-field micrograph showing coherent nanoscale cuboidal Heusler precipitates in Ni-45Ti-5Al (in at%) aged at 600°C for 2000 h.

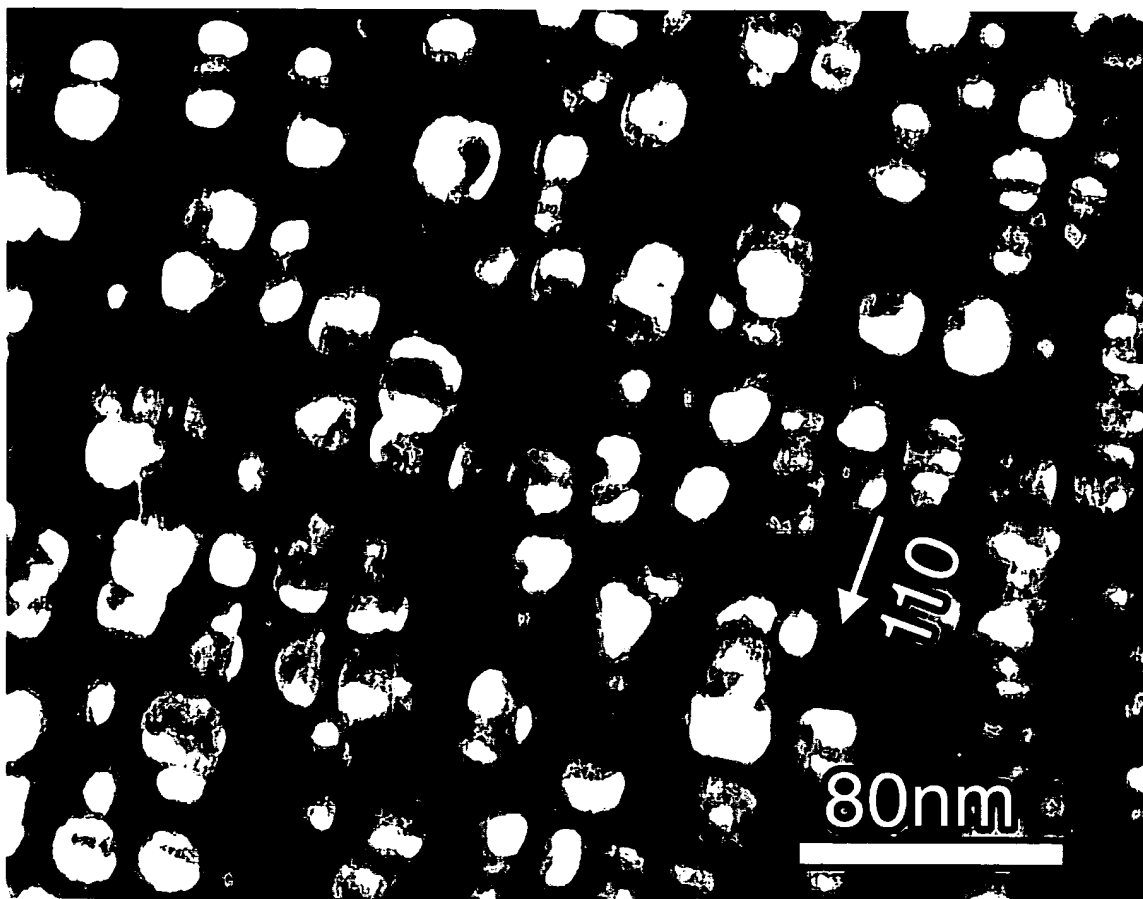
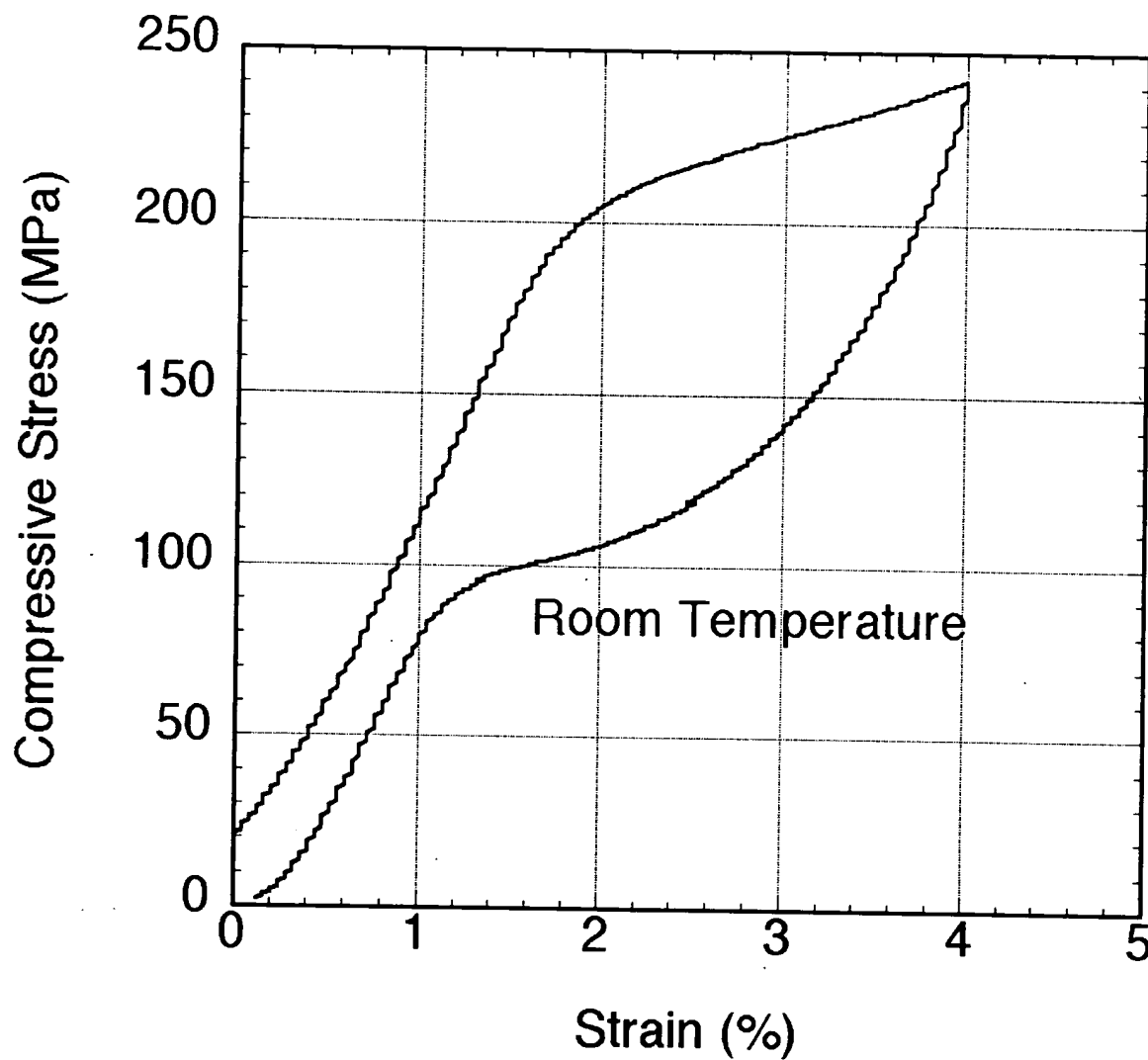


Figure 7B. TEM dark-field micrograph showing coherent nanoscale spheroidal Heusler precipitates in Ni-40Ti-5Al-5Zr (in at%) specimen aged at 600°C for 2000 h.



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Figure 8. The compressive stress-strain response of Ni-47Ti-3Al-25Pd aged at 600°C for 100 h, tested at room temperature. Strain includes machine compliance.